CLAIMS

1. Process for waterproofing semimanufactured footwear, clothing items and accessories, said semimanufactured product having a three-dimensional conformation with at least one inner surface and one outer surface, characterized in that it comprises the following operative steps:

- arranging the semimanufactured product onto a shaped support (14; 27, 28; 30, 31) with at least one waterproofing sheath (18) shaped for entirely or partially cover the surfaces to be waterproofed of the semimanufactured product, at least one glue layer being arranged between these surfaces and the waterproofing sheath (18);
- pressing between two deformable plates (2, 2') the semimanufactured product provided with the waterproofing sheath (18) and arranged on the shaped support (14; 27, 28; 30, 31).

2. Process according to the previous claim, characterized in that said glue is thermoactivable and is heated during the pressing so that the waterproofing sheath (18) is joined to the semimanufactured product.

3. Process according to one of the previous claims, characterized in that the semimanufactured product is turned inside out before it is arranged on the shaped support (14; 27, 28; 30, 31) so that its outer surface is turned toward the shaped support (14; 27, 28; 30, 31) and its inner surface is turned toward the waterproofing sheath (18).

4. Process according to one of the previous claims, characterized in that the shaped support (14; 27, 28) is expanded before the pressing.

5. Process according to one of the previous claims, characterized in that the outer surface of the shaped support (14; 27, 28; 30, 31) is provided with at least one elastic, antiadherent and heat-resistant coating.

6. Process according to one of the previous claims, characterized in that the outer surface of the shaped support (14; 27, 28; 30, 31) is shaped so as to adhere to the surfaces of the semimanufactured product which are turned toward the shaped support (14; 27, 28; 30, 31) during the pressing and to compensate their irregularities, if any.

7. Process according to one of the previous claims, characterized in that the glue is distributed onto the waterproofing sheath (18) before the latter is coupled with

the semimanufactured product.

8. Process according to claim 7, characterized in that the glue is distributed onto the waterproofing sheath (18) in a discontinuous manner, in particular as a glue pattern.

9. Process according to one of the previous claims, characterized in that the waterproofing sheath (18) comprises at least one membrane made of a semi-permeable material.

10. Process according to claim 9, characterized in that said semi-permeable membrane is non-porous and carries out the passage of the water vapor by osmosis.

11. Process according to claim 9 or 10, characterized in that the waterproofing sheath (18) comprises an elastic fabric coupled with said semi-permeable membrane.

12. Process according to one of claims 9 to 11, characterized in that the waterproofing sheath (18) comprises at least one piece of semi-permeable membrane which is cut with the size of the inner surface of the semimanufactured product and is folded so as to superimpose two edges which are welded before the pressing so as to form at least one strip (25) and give to the waterproofing sheath (18) a three-dimensional conformation similar to the semimanufactured product arranged on the shaped support (14; 27, 28; 30, 31).

13. Process according to claim 12, characterized in that a waterproofing tape is applied astride said strip (25) after the pressing.

14. Semimanufactured footwear, clothing item or accessory, characterized in that it is waterproofed by means of the process according to one of the previous claims.

15. Footwear upper, characterized in that it is waterproofed by means of the process according to one of claims 1 to 13.

16. Shoe, characterized in that it comprises an upper according to claim 15.

17. Glove, characterized in that it is waterproofed by means of the process according to one of claims 1 to 13.

18. Machine for waterproofing semimanufactured footwear, clothing items and accessories, which is provided with a pressing device (1) having at least one pair of deformable plates (2, 2') comprising a hollow body, the pressing surface (3) of which is

elastic and suitable for being urged outwards by a fluid under pressure, characterized in that at least one of said deformable plates (2, 2') is fixed in a mobile manner to a support structure (6) for opening or closing the pressing device (1) around at least one shaped support (14; 27, 28; 30, 31) which is provided with transport means (12, 12', 13) to and from said pressing device (1) and is suitable for supporting said semimanufactured product during the pressing with at least one waterproofing sheath (18).

19. Machine according to claim 18, characterized in that said pressing device (1) is provided with heating means for activating at least one layer of thermoactivable glue arranged between the semimanufactured product and the waterproofing sheath (18).

20. Machine according to claim 18 or 19, characterized in that said shaped support (14; 27, 28; 30, 31) is provided with heating means for activating at least one layer of thermoactivable glue arranged between the semimanufactured product and the waterproofing sheath (18).

21. Machine according to one of claims 18 to 20, characterized in that one or both deformable plates (2, 2') are pivoted to the support structure (6) so as to rotate for opening or closing the pressing device (1).

22. Machine according to one of claims 18 to 21, characterized in that the rotation axis of one or both deformable plates (2, 2') is substantially vertical.

23. Machine according to one of claims 18 to 22, characterized in that both deformable plates (2, 2') rotate around a same axis.

24. Machine according to one of claims 18 to 23, characterized in that a plurality of arms (7, 7') are fixed outside the deformable plates (2, 2') so that an arm (7') of a deformable plate (2') is arranged between two arms (7) of the other deformable plate (2).

25. Machine according to claim 24, characterized in that the end of the arms (7, 7') close to the support structure (6) is provided with a hole in which a pin (8), around which the deformable plates (2, 2') can rotate, is inserted.

26. Machine according to claim 24 or 25, characterized in that the end of the arms (7, 7') opposite to the support structure (6) is provided with a hole in which the

piston of one or more cylinders (9), acting as bolts for locking the deformable plates (2, 2') when they are closed, can penetrate.

27. Machine according to one of claims 18 to 26, characterized in that the transport means (12, 12', 13) of the shaped support (14; 27, 28; 30, 31) comprise at least one rail (12) on which a carriage (13), on which is in turn mounted the shaped support (14; 27, 28; 30, 31), can run.

28. Machine according to claim 27, characterized in that said transport means (12, 12', 13) comprise two rails (12, 12') for alternately transporting two shaped supports (14; 27, 28; 30, 31) in the same position between the deformable plates (2, 2') of the pressing device (1).

29. Machine according to claim 28, characterized in that the two rails (12, 12') converge toward the pressing device (1).

30. Machine according to one of claims 18 to 29, characterized in that the shaped support (14; 27, 28) can be expanded before it is pressed in the pressing device (1).

31. Machine according to one of claims 18 to 30, characterized in that the shaped support (14) comprises at least one mobile member (19) suitable for being pushed outwards by one or more cylinders arranged in the same support.

32. Machine according to claim 31, characterized in that the shaped support (14) is similar to a foot and the mobile member (19) is arranged in the position of the heel.

33. Machine according to claim 32, characterized in that the mobile member (19) is fixed in a removable manner to the shaped support (14) so as to substitute it with other mobile members having different sizes, so as to adapt the shaped support (14) to shoe uppers having different sizes.

34. Machine according to one of claims 18 to 33, characterized in that the shaped support (27, 28) comprises a pair of shaped members (27, 28) which can run on a guide (26) according to the position of a wedge (29) which can slide between these shaped members (27, 28).

35. Machine according to claim 34, characterized in that the shapes of said shaped supports (27, 28) comprise the heel and the tip, respectively, of a foot.

36. Machine according to one of claims 18 to 29, characterized in that the shaped support (30, 31) comprises a first shaped member (30) on which a second shaped member (31) can be mounted, said second shaped member (31) being suitable for being inserted into the semimanufactured product to be waterproofed before said mounting.

37. Machine according to claim 36, characterized in that the first and the second shaped support (30, 31) have a shape substantially equal to a hand portion including at least one finger.

38. Machine according to claim 37, characterized in that the first shaped support (30) includes middle, ring and little fingers and the second shaped support (30, 31) includes forefinger and thumb.

39. Machine according to one of claims 19 to 38, characterized in that said heating means comprise one or more inlet ducts (4) provided with valves for introducing into the deformable plates (2, 2') compressed air heated by at least one heat exchanger (5), as well as at least one outlet duct (10, 10') provided with a valve for discharging this compressed air outside.

40. Machine according to one of claims 19 to 39, characterized in that said heating means comprise one or more one or more heating members (21) arranged inside the deformable plates (2, 2') for heating the fluid contained therein by conduction and convection, as well as the pressing surfaces (3) by irradiation.

41. Machine according to one of claims 19 to 40, characterized in that said heating means comprise one or more electric resistors arranged in the shaped member (14; 27, 28; 30, 31).

42. Machine according to one of claims 18 to 41, characterized in that the devices (9, 12, 12', 23, 23') for the movement of the mobile components (2, 2', 13, 19) of the machine itself are driven in a pneumatic manner.

43. Machine according to one of claims 18 to 42, characterized in that the pressing device (1) is closed laterally by a pair of containers (22, 22'), at the end by the support structure (6), and below by a platform (11) extending frontally, so as to prevent the accidental access to the pressing device (1).

44. Machine according to one of claims 18 to 43, characterized in that the

outer surface of the shaped support (14; 27, 28; 30, 31) is provided with at least one elastic, antiadherent and heat-resistant coating.

45. Machine according to one of claims 18 to 44, characterized in that the outer surface of the shaped support (14; 27, 28; 30, 31) is shaped so as to adhere to the surfaces of the semimanufactured product which are turned toward the shaped support (14; 27, 28; 30, 31) during the pressing and to compensate their irregularities, if any.

46. Semimanufactured footwear, clothing item or accessory, characterized in that it is waterproofed by means of the machine according to one of claims 18 to 45.

47. Footwear upper, characterized in that it is waterproofed by means of the machine according to one of claims 18 to 45.

48. Shoe, characterized in that it comprises an upper according to claim 47.

49. Glove, characterized in that it is waterproofed by means of the machine according to one of claims 18 to 45.